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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/679,260
Filing Date: October 07, 2003
Appellant(s): CHENG ET AL.

MICHELLE R.OSINSKI
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 25, 2008 appealing from the Office action mailed October 29, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,240,970	OSTRANDER ET AL	6-2001
2003/0087053	FUKUSHI	5-2003

5,937,911	KODAMA ET AL	8-1999
2002/0134451	BLASKO ET AL	9-2002
6,089,278	NISHINO ET AL	7-2000
2001/0006712	HIBINO ET AL	7-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 3, and 4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ostrander in view of Fukushi and Kodama. The patent to Ostrander discloses the recited hose for transporting fluid containing hydrogen such as fuels comprising an inner layer of a fluorine based thermoplastic material such as polyvinylidene fluoride (PVDF) or ethylenetetrafluoroethylene (ETFE), a layer in some embodiments can be provided as a barrier layer comprised of ethylene vinyl alcohol (EVOH), and an outer layer formed of polyamides. The use of the tube for a hydrogen feeding hose for a fuel cell is considered to be merely intended use, where a hose of the same materials is capable of use for hydrogen feeding in a fuel cell, where such is also provided in the preamble only, and fails to breathe life into the body of the claim which merely recites materials used for hose layers. The patent to Ostrander discloses all of the recited structure with the exception of using EVOH in combination with fluorine based thermoplastics, where Ostrander only uses EVOH in situations where polyamides make up the inner layer, and forming the outer layer of polybutylene terephthalate (PBT). The patent to Fukushi discloses that it is known in the art to form a multilayer hose for use with fuels with an the use of PVDF and ETFE being possible for the layers and that EVOH can also be used as a barrier layer used in combination with other layers of fluorine based thermoplastics to improve the barrier properties of the hose to better block permeation of gases. It would have been obvious to one skilled in the art to modify the hose in Ostrander by using the EVOH barrier layer in combination with the inner PVDF or ETFE layers as such is known in the art to provide further barrier properties and protect against permeation of gases as suggested by Fukushi to make the hose more useful. The patent to Kodama discloses the recited multilayer hose for fuel transport comprising an inner layer 1, where the inner layer can be formed of PVDF or ETFE, and the outer layer 2 outside of the inner layer and can therefore be considered an outer layer can be formed of polyamides or a polyester resin including PBT can be used in place of polyamide. It would have been obvious to one skilled in the art to substitute PBT for use in the outer layer of Ostrander in place of polyamide as suggested by Kodama as such are equivalent materials used interchangeably, and where PBT would have certain beneficial qualities over the polyamide for use in specific environments and would provide different properties for use in different environments to make the hose more useful for a wider range or applications.

Claim 2 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Ostrander in view of Fukushi and Kodama as applied to claims 1, 3, and 4 above, and further in view of Blasko. The patent to Ostrander as modified discloses all of the recited structure with the exception of using ethylene fluorinated ethylene propylene (EFEP) for the inner layer. The patent to Blasko discloses that it is old and well known in the art that EFEP can be used in place of ETFE interchangeably where EFEP is more melt processible. It would have been obvious to one skilled in the art to modify the hose in Ostrander as modified by substituting EFEP for the other fluoropolymers used in the inner layer as suggested by Blasko as such would be more melt processible and would provide different properties for use in different environments making the hose more useful for a wider range of applications.

Claims 5 and 6 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ostrander in view of Fukushi and Kodama as applied to claims 1, 3, and 4 above, and further in view of Nishino. The patent to Ostrander as modified discloses all of the recited structure with the exception of providing a polyurethane based adhesive layer to connect the layers together. The patent to Nishino discloses that it is old and well known in the art that ETFE and PVDF can be used for hose inner layers and in order to better adhere this and other layers together in the hose, including barrier layers, a polyurethane based adhesive can be used. It would have been obvious to one skilled in the art to modify the hose in Ostrander as modified by providing layers of polyurethane based adhesive to help bond layers together as suggested by Nishino as such would provide more secure connection of dissimilar layers, and would provide different properties for use in different environments making the hose more useful for a wider range of applications.

Claims 7-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ostrander in view of Fukushi and Hibino (712). The patent to Ostrander discloses all of the recited structure, including using polyurethane as an adhesive layer, with the exception of using EVOH in combination with fluorine based thermoplastics, where Ostrander only uses EVOH in situations where polyamides make up the inner layer, using such a fuel hose in combination with a fuel cell with a source of hydrogen fuel, and forming the outer layer of polybutylene terephthalate (PBT). The patent to Fukushi discloses that it is known in the art to form a multilayer hose for use with fuels with an the use of PVDF and ETFE being possible for the layers and that EVOH can also be used as a barrier layer used in combination with other layers of fluorine based thermoplastics to improve the barrier properties of the hose to better block permeation of gases. It would have been obvious to one skilled in the art to modify the hose in Ostrander by using the EVOH barrier layer in combination with the inner PVDF or ETFE layers as such is known in the art to provide further barrier properties and protect against permeation of gases as suggested by Fukushi to make the hose more useful. The patent to Hibino discloses the recited multilayer hose for fuel transport, including for use with a hydrogen fuel filled fuel cell as well as other fuels, comprising an inner layer 2 which can be made of various fluororesins, where the inner layer can be formed of PVDF or ETFE, and the outer layer 4 outside of the inner layer and can therefore be considered an outer layer can be formed of polyamides or a polyester resin including PBT can be used in place of polyamide, or various other materials are also shown to be equivalent and used for the outer layer which can be made of the same or different material from that of the inner layer, where a barrier layer is also provided 3 which is made of metal. It would have been obvious to one skilled in the art to substitute PBT for use in the outer layer of Ostrander in place of polyamide as suggested by Hibino as such are equivalent materials used interchangeably, and where PBT would have certain beneficial qualities over the polyamide for use in specific environments and would provide different properties for use in different environments to make the hose more useful for a wider range or applications, and that such a hose can be used not only for fuel, but specifically for use in combination with hydrogen fuel filled fuel cells where it would have been obvious to use the hose of Ostrander in combination with fuel cells filled with hydrogen fuel as suggested by Hibino where such is an alternate use for the hose and the reference to Hibino teaches the hose of Ostrander is capable of use in combination with these types of fuel as well.

Claims 7-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hibino (712) in view of Ostrander. The reference to Hibino discloses all of the recited structure with the exception of using EVOH as the intermediate barrier layer, using PVF as one of the fluororesins used for the inner layer, and providing a polyurethane adhesive layer. It would have been obvious to one skilled in the art to modify the intermediate barrier layer of Hibino by substituting EVOH as such is another known equivalent intermediate barrier layer used in combination with fluororesins and PBT in fuel hoses, to use PVF as the inner fluororesin material as such is equivalent to ETFE and other fluororesins, where Hibino teaches PVDF which is a form of PVF, and to provide a polyurethane bonding layer to connect the layers together thereby forming an adhesive layer as suggest by Ostrander where such would provide for a more flexible hose, suggest an equivalent material known for use for inner layers of fuel hoses when fluoropolymers are used, and to insure the layers of different materials stay connected together to thereby prevent premature failure and save money in replacement costs.

(10) Response to Argument

In order to make the following response to arguments simpler, the examiner will use the following abbreviations for the specific materials being recited in the claims and the references:

Vinyl ethylene alcohol (also known as ethylene vinyl alcohol): EVOH
Polybutylene terephthalate: PBT
Ethylene fluorinated ethylene propylene: EFEP
Ethylene tetrafluoroethylene: ETFE
Polyvinylidene fluoride: PVDF
Polyurethane: PU
Polyamide (also known as Nylon): PA

where these abbreviations were also set forth in the rejection and are just repeated to insure it is clear what the examiner is referring to in the following arguments.

It should also be noted at this time, that all references deal with hose structures used to form multilayer tubes or hoses for use as fuel conveying tubes that have barrier properties, therefore all the references are of the same field of endeavor with each other, as well as Appellants article. Also, claim 1 is considered based upon hose structure recited in claim 1, where the use of such as a "hydrogen feeding hose for a fuel cell" is considered merely intended use, and as preamble language which does not breathe life into the body of the claim as set forth in the rejections above.

With regards to paragraph A(1), the references to Ostrander discloses the use of an EVOH intermediate layer (note the Ostrander reference refers to ethylene vinyl alcohol by the term EVA which is sometimes used in error as an abbreviation for EVOH, where EVA is normally used as an abbreviation for ethylene vinly acetate, however Ostrander does recite ethylene vinyl alcohol is what they are abbreviating as EVA; for clarity the examiner will refer to ethylene vinyl alcohol always as EVOH) in column 9, line 54 to column 10 line 27 as being various materials, and then continues in column 10, lines 28-43 to describe other alternate materials used for the intermediate bonding layer such as EVOH as a barrier to various materials which EVOH is known to block permeation of; however, Ostrander only specifically sets forth examples of using EVOH when PA is used as the inner layer. Ostrander does, however, set forth in column 9, lines 11-17 sets forth that in addition to the inner layer being a permeation barrier to fuels, that the intermediate layer 16 can also exhibit "properties of resistance to permeation of aliphatic and aromatic materials such as those found in fuel" thereby suggesting the use of a second permeation barrier layer be provided in addition to the innermost layer. Ostrander in column 1, lines 6-11 describes the use of the tubing for multilayer tubes for fuel lines, and continues in lines 20-29 to describes blocking hydrocarbons which inherently would include hydrogen in that hydrocarbons contain hydrogen, and further lines 31-40 describe forming the inner layer of materials to block diffusion of materials, including hydrocarbons, from fuels by using PA types as barrier layers. In column 3, lines 28-52 describe various materials used to form an outer layer 18 of the multilayer tube including PA and various other materials. In column 4, lines 43-65 various materials are set forth for forming inner layer 14 specifically the use of PA, where in column 5, lines 29-40 such are required to be permeation barrier materials, then goes on in column 6, lines 39-55 to describe an alternate material to be used as the barrier inner layer 14, specifically the use of fluorine based thermoplastic materials such as PVDF or ETFE. Therefore, Ostrander has set forth not only that fluorine based thermoplastic are known barrier materials used for inner layers, but that such are used as an equivalent material to PA for the inner barrier layer, and that PA is a known barrier layer to begin with. In light of the fact that Ostrander as discussed above also discloses the use of a barrier layer for the intermediate layer 16, specifically that EVOH can be used, and that outer layer 18 is also made of PA which has already been established as a barrier material, is in fact disclosing that it is known in the art to form at least a three layer hose structure for use with fuels that comprises the use of barrier materials for all three layers. Ostrander also discloses that additional layers can also be provided. As discussed above, Ostrander fails to disclose the use of EVOH in combination with the embodiments utilizing fluorine based materials such as PVDF and ETFE for the inner layer 12, and fails to disclose the use of PBT for the outer layer.

The reference to Fukushi discloses in paragraphs [0004]-[0005] that the hose is designed to reduce permeation of fuel in fuel hoses by use of materials having permeation barrier properties, including specific types of fuel. In paragraph [0020] the use of fluoropolymers such as ETFE are known for fluoropolymer layers as are PVDF as set forth in paragraph [0022], and further goes on to show PA is also known as a non-fluorinated polymer material that can also be used based upon requirements of the material to meet specific chemical or heat resistance as well (see paragraph [0030]). In paragraph [0039] it is disclosed that EVOH as a barrier layer and further goes on in paragraph [0041] to disclose that the barrier layer which is the intermediate layer 14 can connect inner layer 16 which is disclosed to be ETFE or PVDF with the outer layer 12 which can be formed of various materials including PA. Therefore, as set forth above, Ostrander discloses the use of EVOH as an intermediate layer between two PA layers, but fails to disclose the use of such when a fluorine based thermoplastic is used for the inner layer in place of the PA layer. Fukushi clearly discloses that it is old and well known in the art to use EVOH as a barrier intermediate layer to connect an inner fluorine based thermoplastic to an outer layer of PA. Therefore, Fukushi discloses not only that it is known in the art that EVOH can be used as an intermediate layer when a fluorine based thermoplastic is used as the inner layer, but also that one skilled in the art would expect results based on the teachings of Fukushi that EVOH is also capable of use as an intermediate layer to form a barrier and connection of an inner ETFE or PVDF layer with an outer PA layer, as well as other non-fluorinated outer layers. Therefore, as supported by the KSR decision, Fukushi discloses that combining prior art elements according to known methods would yield predictable results, that a simple substitution of EVOH for the intermediate layer in Ostrander between ETFE or PVDF and PA would obtain predictable results, that such is a known technique used to improve a similar device such as fuel hoses to which Ostrander and Fukushi are both concerned with, that applying a known technique to a known device that is ready for improvement would result in predictable results, and that given the finite number of materials set forth in Ostrander that based on the teachings of Fukushi it would be obvious to one skilled in the art to try using the EVOH layer with the other embodiment of Ostrander that utilizes the fluorine based thermoplastic as the inner layer. It is also clear that the teachings of Fukushi set forth that it is known that work in one field of endeavor such as fuel hoses may prompt variations of it for use in the same field as Ostrander of a fuel hose based on design incentives or other market forces when the variations are predictable to one of ordinary skill in the art. Fukushi also sets forth in paragraph [0035] that other known useful non-fluorinated polymers, for example those used in place of PA materials would also be polyesters which are also taught to be equivalent non-fluorinated outer layer materials which can be connected to an inner fluorinated layer by use of EVOH.

With respect to Kodama, the reference sets forth in column 7, lines 24-31, that a fuel transporting hose is made of at least an inner layer of a fluorine contained resin and an outer layer formed of PA or polyester resin, where the polyester resin used in place of a PA resin for the outer layer can be formed of PBT (see column 7, lines 41-49), and where the fluorine containing resin is PVDF or ETFE (see column 7, lines 32-40). It is also set forth in Kodama that an intermediate layer 4 can also be included as an adhesive layer if desired. Based upon the teachings of Kodama in line 27 of column 7, the outer layer is formed of "polyamide or polyester resin", and line 49 of column 7 which sets forth polyester resin would include PBT. Therefore, Kodama clearly sets forth the equivalence of using as an outer layer any suitable non-fluorinated resin which would include not only PA but also polyester such as PBT, therefore Kodama directly teaches the substitution of PBT for PA in an outer layer of a multilayer fuel hose that also utilizes PVDF or ETFE as the inner layer. Therefore, as supported by the KSR decision, Kodama teaches combining prior art elements according to known methods to yield predictable results, that a simple substitution of one known material for another would obtain predictable results, use of a known technique such as utilizing a different type of material can be used to improve a similar device in the same way, applying a known technique to a known device ready for improvement would yield predictable results, that it would be obvious to try using PBT as an outer layer in place of PA when one is choosing from a finite number of identified predictable solutions would provide a reasonable expectation of success, and that known work in one field of endeavor may prompt variations of it for use in the same field of endeavor as both Appellant and Ostrander are predictable to one of ordinary skill in the art.

In general, as set forth above, Ostrander discloses the use of barrier materials in all three layers of the tube recited, and knowing that all materials are known in the art to be equivalent for use in fuel tubes that have inherent barrier properties, are substituted for other known materials in the art that have the same properties and are taught to be equivalents thereof. The suggestion that Ostrander implies EVOH is not used with fluorinated thermoplastics is not viable, in that no where in Ostrander is it set forth that EVOH cannot be used when fluorinated thermoplastics are used, and further Ostrander in column 13, lines 30-36 sets forth that the preferred embodiments set forth may be modified and that the examples are merely exemplary rather than limiting, and based upon the teachings of the modifying references with regards to known equivalent materials, it is supported by the references that the combinations are viable, and taught by the prior art as old and well known in the art. Any attempt to imply a more specific disclosure in Ostrander is not supported by the reference or the teachings of the modifying reference, and in absence of actual language preventing this combination, implying what a reference may teach is not a convincing argument, especially in light of the teachings of other known prior art such as the modifying references. The teachings of Kodama set forth that polyesters such as PBT are known equivalent materials used in outer layers where PA is also a known material used. Therefore, the modifying reference teaches the equivalence of PBT to PA when used in an outer layer, Especially when used in fuel hoses, and it is old and well known in the art, as supported by the prior art as well, that materials chosen are so chosen based upon the environment in which the hose is to be utilized, such as Fukushi which teaches the use of materials based upon specific chemical and heat requirements of the material, and it is old and well known in the art that materials are chosen based upon the environment that the hose is to be exposed. Therefore, the teaching in Kodama that PA is equivalent to PBT and that PBT is used in example 2 (and PA is used in example 1) from table 1 shows that the PBT example 2 has greater bursting pressure results than example 1, thereby teaching the use of PBT at least would improve bursting pressure resistance in the hose which is one property that is improved by the use of PBT over PA in a hose, thereby supporting the examiners position that one skilled in the art would be motivated to make the substitution not only based upon equivalence but also by the fact that PBT would have different properties than the use of PA and would be selected by one skilled in the art based upon the environmental needs of the user. In conclusion, Kodama and Fukushi both teach the equivalence of the use of specific materials as substitutes for other materials in the same layers as the base reference as set forth above.

As set forth above, both modifying references set forth predictable results for making the substitutions of materials due to their equivalence (see above discussion of how the references to Kodama and Fukushi meet the requirements related to the KSR decision, not repeated at this point since such would merely be reiterating what was set forth above already in the discussion of the individual references and there combination with the base reference to Ostrander).

With respect to claim 2, such is not argued other than the arguments relating to the independent claim 1 and the rejection directed thereto, therefore there is no need to respond to an argument directed to the limitations of claim 2.

The same is true of claims 5 and 6 which also are not separately argued based upon their merits, therefore such stand or fall based upon the rejection of claim 1, and the discussion above with relation to the rejection of claim 1.

With respect to arguments directed under section B(1) of appellants arguments, claim 7 contains the same limitations set forth in claim 1 with the addition of disclosing a fuel cell assembly comprising a source of fuel consisting of hydrogen, a fuel cell, and the structure of the hose of claim 1. Ostrander is directed to a fuel hose with the structure set forth above. As set forth above, Fukushi discloses the use of EVOH as an intermediate layer which is capable of use with a fluorinated resin inner layer. The arguments in this section are the same as those set forth above with respect to the combination of Ostrander and Fukushi, and for the same reasons as set forth above, the combination of the teachings of Fukushi with Ostrander are taught by the prior art which will not be repeated at this time.

With respect to the Hibino reference, such sets forth in paragraph [0002] the invention of Hibino is directed to hoses having a very high level of fluid impermeability and satisfactory flexibility, and goes on in paragraph [0004] to state hoses formed of fluororesins have been preferred because of their particularly high fuel impermeability. In paragraph [0028], the hose of the invention of Hibino may be used for "liquids and gases, including fuel such as gasoline for a motor vehicle, alcohol or hydrogen for a fuel cell" thereby setting forth that hoses of the invention of Hibino can be used not only as fuel hoses for gasoline (which are types of fuels set forth in Ostrander), as well as for hoses used in combination with a fuel cell when sources of hydrogen fuel are used, thereby setting forth the equivalence of using hoses having fluorine based thermoplastics and barrier layers are used to form hoses that are capable of use not only with standard fuels but also hydrogen fuels used in combination with fuel cells. Further, in paragraph [0031], Hibino sets forth that resins used for the thermoplastic layers of the hose may be selected from materials which include, PA, EVOH, polyester resin which includes PBT, fluororesins such as ETFE and PVDF, and also set forth in this paragraph is that the inner and outer layer can be formed of the same or different resin materials on either side of the barrier layer, where the materials have different properties and can be chosen accordingly. Therefore, Hibino clearly sets forth the equivalent use of various thermoplastic materials for one another based upon material properties, including the equivalence of using PBT for PA in the layer of a fuel hose, and where such fuel hoses are not only capable of use with fuels but specifically for use with hydrogen fuels in fuel cell applications. As per the findings in the KSR decision, Hibino teaches combining prior art elements according to known methods to yield predictable results by providing PBT for PA and utilizing such with fuel cells, a simple substitution of one known material for another obtains predictable results is also taught for use of PBT in place of PA and for use with fuel cells, to use a similar technique to improve similar devices in fuel hoses to improve similar devices in the same way, that applying a known technique of using PBT for PA and such hoses for use with fuel cells to a known device ready for improvement to yield predictable results, that it is obvious to try other materials in place of PA such as PBT for an outer layer material and to use such for other fuel uses including fuel cells utilizing hydrogen fuels is chosen from a finite number of identified predictable solutions with a reasonable expectation of success, and that known work in the field of fuel hoses such as taught by Hibino can be used in the same field of fuel hoses such as Ostrander due to design or market forces, such as the new market of hydrogen fuels that replace known fuels, are predictable to one of ordinary skill in the art as taught by Hibino. Therefore, based upon the KSR decision, a prima facie case is set forth for interchanging the equivalent features of the prior art references for the reasons set forth above. Claims 8-12 were not further argued, and would stand or fall based upon the independent claim 7.

With respect to arguments set forth in B(2), the only argument set forth is that modifying the barrier layer of Hibino is taught away from by Hibino which requires a metal barrier layer. Hibino has identified that metal barrier layers do result in less flexible hoses in paragraph [0007] and that this is a known problem with using metal barrier layers of certain thicknesses. Hibino overcomes this by providing plastic layers with very thin layer of metal provided thereon, such as set forth in [0019]. Ostrander discloses that it is known to provide the barrier layer 16 with metal additives such as copper, stainless steel, and silver (col. 9, lines 18-31) which are the same materials set forth as used in the barrier layer of Hibino in paragraph [0029] which thereby teaches that metals can be utilized with plastic materials in barrier layers. Ostrander teaches known barrier plastics used in barrier layers of fuel hoses can be used, and where EVOH is a known barrier material so used as set forth above. Therefore, it is considered obvious to one skilled in the art to substitute one known barrier material for another especially when utilizing metal barrier layers of larger thicknesses reduces the flexibility of the hose, and the use of an EVOH material as the barrier layer would result in a flexible hose that is capable of fuel transport use as well. Therefore, as supported by the KSR decision, Ostrander supports combining prior art elements such as equivalent barrier layers according to known methods would yield predictable results, that simple substitution of one type of barrier layer for another type of barrier layer would obtain predictable results as suggested by both Hibino and Ostrander as set forth above, use of a known technique such as utilizing an EVOH layer as a barrier layer would improve similar devices in the same way such as providing a material which would be more flexible than a similar metal barrier layer, applying a known technique such as providing an EVOH barrier layer as suggested by Ostrander to a known device ready for improvement to yield predictable results would be obvious, it would be obvious to try other barrier layers such as EVOH which are known barrier layers used in fuel hoses which is one of a limited finite number of identified barrier materials in Ostrander to yield predictable solutions with a reasonable expectation of success where Ostrander teaches it is known to use EVOH as a barrier layer in a fuel hose and where such can be provided with metals such as stainless steel, copper, or silver, and that known work in one field such as fuel hoses may prompt variations in the same field of fuel hoses based on design incentives such as flexibility or other market forces such as expense when the variations are predictable to one of ordinary skill in the art in light of the teachings of the prior art to Ostrander and Hibino. Therefore, as per the teachings of Ostrander, metal can still be included in the barrier layer, and would not teach away from the use of metal in a barrier layer as suggested by Appellant. Claims 8-12 as set forth by Appellant will be based upon the independent claim 7 arguments only, with no further argument being offered against the limitations set forth in claims 8-12.

In conclusion, it is considered known in the art that fluorine based resins as well as EVOH, PA, and PBT are all known barrier materials used in fuel hoses, and that these materials inherently block hydrocarbons, which would include hydrogen, as such is an inherent property to the material. Applicant appears to acknowledge this connection in the specification page 2, lines19-21. Therefore, the prior art as set forth above teaches the same materials used by appellant in the same layers, as taught by the combination of the prior art references, and where these materials have the inherent properties known in the art including barrier properties, and therefore meet the claimed subject matter Appellant is appealing the rejection of.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/James F. Hook/

Primary Examiner, Art Unit 3754

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/Kevin P. Shaver/

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